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AUTHOR Miller, Michael T.
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ABSTRACT

In Colonial America vocational education remained separate from defined educational settings and was confined to the working classes. Separation of vocational training from the colleges persisted until the beginnings of the Industrial Revolution in the late 1700s, at which time increased dependence on technology led educators to acknowledge the need to extend vocational education into the college curriculum. Passage of the Morrill Act (the legislation authorizing land-grant colleges) in 1862 did more than open higher education to a broader public and improve agricultural techniques. It also resulted in development of the concept of integrated academics. For the first time, classical studies ranging from languages to mathematics were integrated into agricultural and science courses. Faced with a lack of adequately prepared students for higher education, leaders in the land-grant colleges created university high schools that placed vocational preparation at the forefront of their curriculum. Despite resistance by some higher education officials, vocational education began to make substantial progress as scholars and practitioners at colleges and universities furthered the development of vocational education through research and service to secondary school teachers and administrators. (Contains 16 references.) (MN)

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The Historical Development of Vocational Education in the United States: Colonial America through the Morrill Legislation

Dr. Michael T. Miller
Assistant Professor, Vocational and Adult Education
Director, Nebraska Research and Development Unit
for Vocational Education
530 East Nebraska Hall
University of Nebraska
Lincoln, Nebraska 68588-0553

(402) 472-3337
FAX: (402) 472-5907

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Abstract

The passage and implementation of Perkins II brought many changes to the practice and teaching of vocational education. Considering this change, it has become increasingly important to understand the historical development of formal vocational education. This investigation was designed to outline and understand incidents and attitudes of those involved with vocational education's development in Colonial America, beginning around approximately 1600, through the passage of the Morrill Legislation in 1862.

With the passage of Perkins II in 1990, vocational education has undergone dramatic changes focused on encouraging individual disciplines within the context of the vocational education 'umbrella.' These changes, ranging from the elimination of prescriptive fiscal requirements to attention to special populations, require a re-focusing on the role and intent of the federal government in the programmatic implementation of vocational education.

With the continued changing federal role in vocational education, it has become increasingly important to understand and appreciate the historical evolution of formal vocational education in the United States. This investigation was subsequently designed to develop a better comprehension of the history behind the development of vocational education in Colonial America through the enactment of the first Morrill Legislation in 1862.

To best understand the various components of this discussion, it is appropriate to define "vocational education." Vocational education has been perceived as practically illustrated and attempted job or career skill instruction. As such, a variety of components fall under the vocational education umbrella: agriculture, business education, health occupations, home economics, marketing education, technical education, technology education, and trade and industrial education.

Areas of study as diverse as industrial education and health occupations are indicative of an arena of study and research

unlimited by a single working definition. The vocational curriculum can be identified as "...a combination of classroom instruction, hands-on laboratory work and on-the-job training--augmented by an active network of student organizations".[1]

Methods

In addition to literature study, two primary techniques were utilized in this investigation: artifact review of both primary and secondary sources, and 17 personal interviews which were classified as both "formal" and "informal." These interviews were conducted over the telephone and in personal interviews. Questions for interviewing vocational education faculty were clustered around the uses and topics identified in the literature.

Colonial America

As pilgrims populated North America throughout the 1500's, a great deal of attention was devoted to the importation of Christianity. Encounters with Native Americans and a strong desire to replicate British traditions and values cultivated an educational system which would develop and impose Christian values in the New World. Such was the purpose in planning Virginia's Henrico College in 1619. Despite Henrico's failure, the Massachusetts Bay Colony created the College at Cambridg (later Harvard) in the 1630's, and the belief in the need for moral development in the New World then prompted the citizens of

Great Britain to launch the "New England's First Fruits" capital campaign to help finance education in North America.

> After God had carried us safe to New England, and we had builded our houses, provided necessaries for our livlihood, reared convenient places for God's worship, and settled the civil government, one of the things we longed for and looked after was to advance learning and perpetuate it to prosterity.
>
> New England's First Fruits, 1643.

Through the combination of education and desired development of social behavior, vocational education ripened slowly in the formal structures of education. Particularly true in the growth of higher education, vocational education remained removed from defined education settings and settled amidst the working classes. The Massachusetts Bay Colony did make provisions for vocational education, however, with the passing of a comprehensive apprenticeship law in 1642. Similar to the English Poor Law of 1601 passed by the General Court of the Colony of New Plymouth, the law required each family or master to teach their child in a "trade or calling and to instruct him how to read and understand the principles of religion and laws of the colony".[2]

Educational Thought

The separation of vocational training from the Colonial Colleges was more than a mere oversight by teachers and administrators. Throughout the first half of the eighteenth century, education was dominated by the same schools of thought

presented by the Renaissance and Reformation. Foremost in this movement was the philosophy of John Locke; a philosophy predicated on developing the 'gentleman.' He believed work to be a form or mechanism which could stabilize the environment by preparing men to sustain society and the actors relevant to social institutions.

> ...(Locke's work) is marked by prosaic common sense and contented worldliness. He aims at discipline, not instruction. He would impart as much instruction in accepted truth as is necessary for good breeding...He has no conception of the methods and aims of physical science, and would still have us look for an explanation of the world to 'spirits,' best known to us through revelation. Thus science is still the handmaid of theology...He is what would to-day be called an 'agnostic'.[3]

Locke's work and beliefs were firmly rooted in an era which closed rapidly and facilitated a calming in education. This calming was disturbed in 1750 by the work of Rosseau, embodied in his Emile. Rosseau viewed education as a means to free man from social status and permit the enjoyment of senses. "What...are we to think of that barbarous education which sacrifices the present to an uncertain future, which loads the child with all sorts of chains, and begins by rendering it miserable, in order to prepare it for some distant, pretended happiness, which it will probably never enjoy?".[4]

Despite the rise in popular opinion for Rosseau, the Colonial Colleges clung to the philosophies and works Voltaire and Locke, among other Reformation and Renaissance thinkers. In doing so, Colonial America reinforced vocational training as

something for the lower socio-economic classes, taught through imitation, not thought processes. With compulsory education in the form of vocational training and basic literacy instruction, apprenticeships abounded, utilizing formal contracts between the "student" and the master.

Industrial Revolution

Colonial leaders could no longer maintain their Renaissance based philosophy with the beginnings of the Industrial Revolution in Great Britain in the late-1700's. With innovations in technology, cotton mills and manufacturing emerged as practical and profitable industries in the United States. Accompanying this growth in the dependence and use of technology for industry was the rise and adoption of Heinrich Pestalozzi's philosophy of education. Pestalozzi, who admittedly borrowed from Rousseau's work, believed that formal education must be open to all children, that teaching methods should cultivate learning and the desire to learn, and that education should be based on facts and the practical circumstances of society, as opposed to theoretical constructs. In relation to vocational education, he "insisted that children should learn not only to think, but also to do, and hence that education should consist largely of manual labor."[5]

The acceptance of Pestalozzi's work mirrored the changing collegiate curriculum. Well into the 1700's the Colonial Colleges had pursued curricula based upon what they had perceived to be appropriate preparation for a relatively narrow job market

place. The goal of education had been more than cultural perpetuation; formal education facilitated employment based career preparation.[6]

As employment opportunities changed to reflect a more diverse and industrial society (between 1800 and 1860, population grew from 5 million to 31 million, and factory, mill, and hand trade employees grew from 350,000 to over 2 million according to Heilbroner[7]), the practicality of religious training and liberal studies faded. By 1800, ministers accounted for only one out of five college graduates, and the existing colleges responded, albeit gradually, with circular changes to include engineering, science, education, and business.[8,9]

The attempt to make education 'more useful' was debated at great length during the final decade of the 1800's, but the movement had already begun in college curricula with the demands of the industrial revolution. Higher education refused to accept, at least philosophically, the concept of being market driven, and instead interpreted their responsibility to be one of forecasting societal needs. Resisting the temptation to respond wholly to specified market demands, academic leaders worked to make the education offered practical. Levine[10] noted that "the marketplace had always been a factor in shaping the curriculum of the college...the
marketplace was making new demands...(and the) definition of the educated person changed gradually and by degree."[11]

The business of curriculum renovation and the economic

development value of education forced national attention to higher education. The combination of events and prevailing attitudes, including those offered by Pestalozzi, ignited the imagination and conception of legislation that would forever change U.S. higher education: the Morrill Act.

The Morrill Act

Throughout the 1800's, America benefitted from the industrial revolution and grew in virtually every aspect. In education for example, there were nine colleges in 1776, and by 1862, there were nearly 200. The passage of the Morrill Act of 1862 was not considered eventful in itself. Indeed, the Morrill Act merely made appropriations of land to each state for support of colleges of agriculture and mechanical arts. The legislation, sponsored by Senator Justin Morrill of Vermont, was first introduced in 1859, passed both houses, and was vetoed by President James Buchanan. The motivation for this passage and veto must first be understood before the implications of the Morrill Act can be realized.

Passage of the Legislation

Leading into the 1850's, the industrial revolution sparked a series of legislative regulations and practices which benefitted both the factory worker and urban communities. This legislative attention to industry came at the expense of the American farmer who was largely passive as Congress supported economic based

funding for industrial development. The agrarian community, in decline, began to feel the pressure of reduced federal support and was already pressured by the demands and events which spawned the War Between the States. The Morrill legislation in 1859 was at least perceived to be an attempt to appease the farmers who had been neglected by earlier Congresses.

Buchanan's decision to veto the Morrill legislation was based largely upon his desire to accommodate Eastern voters and state's rights activist. The nation on the verge of war looked to the White House for leadership, and Buchanan saw a strong federal government as a debit in attempting to deal with state's rights activists in the South. Additional tensions were noted by the White house in favor of vetoing the legislation, such as Eastern seaboard communities who complained that educational institutions were adequate, and that attention needed to be placed on dealing with new urban challenges and not farmers in western states. The rationale for the veto proclaimed to the public was that the legislation was unconstitutional.

In 1862, Senator Morrill, along with the support of Ohio Senator Benjamin Wade, again passed the Morrill Act for Land Grant Colleges through both houses. The rationale was again present for supporting the legislation for the agrarian community farmer, but Wade took advantage of war-time concerns and illustrated that the colleges would be ideal for training officers and engineers for the war effort. President Lincoln signed the legislation in 1862, and subsequent legislation

supporting this initial document were passed in 1890 and 1907 (Morrill II and the Nelson Amendment, respectively). Through Morrill I and Morrill II, 72 new public institutions were opened.

An alternative theory to the passage of the Morrill Act has been noted, claiming political positioning and coalition building were the primary incentives for getting the legislation passed.[12] Drawing upon the personal correspondence of Morrill and relevant articles in the Congressional Globe, Hoyer indicated that 'road blocks' to passing the legislation were politically-partisan motivated, and that Morrill's primary rationale for passing the bill were to provide a more open-access to higher education and right to learn.

Regardless of the rationale for passage, the content of the legislation allowed for the new institutions to develop different courses of study and utilize different teaching techniques. Societal consensus at the time felt the purpose of these institutions "was to prepare students for leadership in developing the agricultural, (mechanical arts), and other natural resources of (their) state."[13]

Results of the Legislation

From their opening, the land grant colleges made efforts to serve the agrarian communities of their geographic area. In doing so, the colleges served as resources and information centers for farmers, offering programs both on and off campus. The success of the land grant colleges in "improving agriculture

in this country was so dramatic and so widely recognized that this form of education came to be accepted as vital to the national welfare..."[14] The land grant colleges were also especially noted for establishing boys' and girls' agriculture clubs in 1898 and farmers cooperative demonstration work in 1949.

The implications of the Morrill Act were more extensive than Morrill and Wade had anticipated. Not only did the founding of these colleges enable higher education to be open to a broader public and improve agricultural techniques, but the concept of integrated academics were first identified. Classical studies ranging from languages and mathematics were integrated for the first time into agricultural and science courses, that is, curricula which was identified as vocational. The vocational and more academic curricula were to be integrated without any rating, ranking, or qualitative judgement of which was superior. Accompanying this integration of academics and the development of the experimental farms and extension programs, mechanical arts and agriculture were given important status and, like science, were taught "as an instrument for molding the societal environment."[15]

The primary difficulty the newly opened institutions encountered was the lack of adequately prepared students for higher education. The result of this perceived failure of public education permanently altered the secondary school curriculum. Until the 1880's, academic and vocational or trade schools existed side-by-side with little interaction, joint programming,

or integration. One system existed to train the public in citizenship and basic life-skills; the other existed to train a workforce.

Leaders in the land grant colleges realized the problems facing higher education, and took it upon themselves to create university high schools. These high schools, run by the land grant colleges, colleges with a mission in agriculture and mechanical arts, placed vocational preparation training at the forefront of their curriculum. [16, 17, 18]

The decision to include vocational training in the secondary school did more than fulfill the self-serving need of student population preparation, it represented a commitment by educators to the ruling educational philosophy. The educational philosophy of the late 1800's was dominated by Herbert Spencer who believed that science must play a vital role in the curriculum of all levels of education. Spencer's philosophy prescribed that "the aim of education is to prepare one for complete living,"[19] as illustrated in what he defined as the five purposes of education: physical improvement; training in a vocation; parenthood (e.g., ethics, family, homemaking); citizenship; and leisure. Science, and the scientific method were evident in each, and higher education responded by developing facilities and opportunities for scholars, researchers, practitioners, and students to experiment.

Consequences of the Legislation

Spencer's philosophy, and indeed the entire land grant college structure did meet with some difficulty. Cornell University, considered the model land grant institution due to its unique characteristics (such as, no church control, coeducation, and "the merging of classics and humanities with agriculture and mechanical arts..."[20]), was the first major university to attempt to encompass the intent of the Morrill legislation. Ezra Cornell had founded the institution to be a setting where virtually any field of study could be undertaken. Under the leadership of president Andrew D. White, however, Cornell's vision of an institution broadly focused on industrial and mechanical arts and sciences was altered. He discontinued and would not allow student manual labor or machinery shops for student work-study or instructional purposes. Only one machine shop for instruction was allowed, and this was incorporated as an extension of the physical plant.[21]

In theory, White had favored mixing sciences with traditional undergraduate studies, but in practice, he followed the example set forth by Charles Eliot, president of Harvard University. Eliot advocated the elective system at Harvard in 1869, but saw the inclusion of sciences and hands-on-training as merely "...a means of preventing social engulfment and annihilation. Like the English Tories of his own day, he was willing to give the lower classes a kind of franchise in order to avoid revolution."[22]

Eliot did develop the Harvard Business School, and accepted the philosophy laid forth by Ezra Cornell. In developing a wide variety of courses to study, Eliot was able to integrate some of the sciences into a curriculum he believed developed critical appreciation, thought, and a gentleman. "Harvard's version of agricultural training was to ask Francis Parkman to lecture on rose gardening in a segregated annex..."[23]

Cornell, despite the mission developed by it's founder, wanted to be like Harvard. Other institutions conceived by the Morrill legislation desired the respect and notoriety accompanying the reputation of Harvard and other schools which dominated higher education in America. White at Cornell envisioned his institution taking on a national leadership role in education, however, scholars typically refused to take agriculture and mechanical arts seriously, hence, White chose to downplay technical training.

The difficulty arising from the White-Eliot relationship for vocational education was indeed one of image and purpose. Once again, vocational training, accepted in public institutions, was intended for lower socio-economic, laboring classes. Regardless of the intent of the Morrill legislation and the economic success related to the development of new institutions, vocational education's reputation as appropriate for the less advantaged was reinforced. Vocational education, would however, enjoy decades of legislative support and federal funding.

Conclusions

The history of vocational education, specifically those programs which now compose the foundation for many educational institutions, owes a great deal to many publics. Without early, non-formal on-the-job training and apprentice programs, vocational education would have been even slower to materialize and be adopted by formal education institutions in North America. Without early educational institutions neglect of vocational education, apprenticeship programs and the concept of hands-on training would have suffered through the philosophical debates restricted to the growth of humanities. Without the industrial revolution, the value of vocational education would have continued unnoticed. Without federal legislation, vocational education would have remained a separate entity in trade schools. Indeed, the evolution of vocational education programs has been rooted in a variety of constituencies which are now served by thousands of trade and technical schools, in addition to secondary, postsecondary, and higher education institutions.

The exploration of the history of vocational education presented here focused specifically on the relationship of vocational and governmental support. In doing so, a history was revealed which illustrated the continuing perception that vocational education was a field of study for a specific 'caste' of learners.

Higher education did not embrace vocational education for it's merits in the late 1800's, but rather, took advantage of a

potential curriculum and area of great student demand. Some may argue that secondary vocational education programs actually did more than any other constituency in formalizing and establishing higher education. Yet, it was the effort of early public higher education administrators which willed a secondary vocational education curriculum.

Despite resistance by some higher education officials, vocational education began a period of substantial progress out of the efforts of higher education. Scholars and practitioners at colleges and universities paved a passage for the future of vocational education through research and service to secondary school teachers and administrators. Through a desire to remain "practical," higher education teachers and scholars prescribed and emphasized the state of the art technology and methods necessary for vocational education's growth.

Even with support and guidance, however, higher education's most influential action might have been made in consort with others in education. This combined 'front,' only years after the passage of Morrill II, established a track record for passing vocational education legislation which was unprecedented and has never been duplicated (including the Smith-Hughes Act of 1917, George-Reed Act and George-Ellzy Act in 1929 and 1934 respectively, George-Barden Act, George-Deen Act, etc.).

The history of vocational education and the higher-secondary education dynamic provide a rich story of success in the very subjective field of education. More importantly, the history

provides a real example of the ability of education to be responsive to societal needs without sacrificing the integrity and nobility which continually threaten academe today.

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